



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,964	12/22/2003	Andrew P. Nguyen	6601.P017	9365
8791 7590 04/17/2007 BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			EXAMINER TADESSE, YEWEBDAR T	
			ART UNIT	PAPER NUMBER
			1734	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/17/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/743,964

Applicant(s)

NGUYEN, ANDREW P.

Examiner

Yewebdar T. Tadesse

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of group I in the reply filed on 01/16/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Upon examination, the examiner has combined group I and group II because there was no serious burden in examining the two groups together.

2. Claims 20-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/16/2007.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, line 14-16; claim 14, lines 1-3 and claim 19, lines 19-21 applicant claims that the controller controlling the at least one pump to change the supply of fluid to the first portion of the passageway or the supply of fluid between the first opening and the second opening. The limitation that the controller controlling the at least one pump to change the supply of fluid is not supported by the

Art Unit: 1734

applicant's disclosure. Applicants' specification teaches (see Figs 4a-4e; paragraphs 28-32; particularly paragraph. 28) the controller controlling the valves to change the supply of fluid (controller's circuit board signal the valves to change the air flow. For the purpose of examination, a controller controlling the valves to change the supply of fluid to the portions of the passageway is assumed.

Claim 13, lines 2-3, recites the limitation "the first opening" and "the second opening" in the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, In claim 1, line 2, the phrase "a first component with a plurality of openings and a passageway therein connected to the plurality of openings" is assumed instead of a first component with at least one opening and a passageway therein connected to the at least one opening, as well as in claim 13, lines 1-3, "the first opening of the plurality of openings" and "the second opening of the plurality of openings of the first component" are assumed.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1734

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (US 5,431,086) in view of Kajita et al (US 5,152,143).

As to claims 1,4-7 and 10-12, Morita et al discloses (see Figs 2-3) an apparatus comprising: an actuator having a first component (cylinder 34) with at least one opening and a passageway therein connected to the at least one opening and a second component housed within the passageway being movable between first and second positions within the passageway, the second component (piston 36) dividing the passageway into first and second portions and sealing the first portion from the second portion; at least one sensor (38, 40, 42 and 44) to detect a position of the second component within the passageway; and a controller (90), a supply source (12) connected to the at least one opening supplying a fluid to the first portion of the passageway, the fluid applying a first force onto the second component, moving the second component between the first and second positions at a first speed, the controller being connected to the at least one sensor, the controller controlling the at least valves or switches (26, 30) to change the supply of fluid to the first portion of the passageway to apply a second force onto the second component, moving the second component between the first and second positions at a second speed. Morita et al lacks teaching a pump system having at least one pump in communication with a controller. However, it is known in the art to include a pumping system in supplying fluid to the to the

Art Unit: 1734

passageways of an actuator and a controller in communication with the pumping system; for instance as evidenced by Kajita et al (see Figs 17-18 and column 17, line 50-column 18, line 54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pump system having at least one pump, that is in communication with a controller, in Morita et al to regulate the delivery rate of operating fluid from the supply source.

As to claims 2-3, in Morita et al the first force and speed are capable of being greater than the second force and speed respectively.

8. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (US 5,431,086) in view of Kajita et al (US 5,152,143) as applied to claim 1 above, and further in view of Bitar et al (US 5,491,422) and Bussan et al (US 4,901,625).

Morita et al teaches electrical sensors to detect the position of the second component (piston). However, the use of electromagnetic and optical sensors detecting the position of a piston is well known in the art; for instance Bitar et al discloses (see Fig 1 and column 2, lines 13-21) electromagnetic sensors, and Bussan et al teaches (see Fig 1 and column 8, lines 8-27) optical sensors to detect the position of a piston. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include electromagnetic or optical sensors in Morita et al to detect the positions of the piston element as desired.

9. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (US 6,159,291) or Akimoto et al (US 5,938,847) in view of Morita et al (US 5,431,086 and Kajita et al (US 5,152,143).

Akimoto et al discloses (see Figs 2-3) a semiconductor substrate processing apparatus comprising: a frame (casing 13a); a substrate support (chuck 22), having a surface in a plane, mounted to the frame to support a semiconductor substrate; a dispense arm (37a) mounted to the frame for movement relative to the substrate support or for translating in a direction transverse to the plane. Morita et al'291 also discloses (see Fig 3) a semiconductor substrate processing apparatus comprising: a frame (pedestal 5); a substrate support (chuck 1), having a surface in a plane, mounted to the frame to support a semiconductor substrate; a dispense arm (7) mounted to the frame for movement relative to the substrate support or for translating in a direction transverse to the plane. Furthermore, Morita et al teaches air cylinder actuating means for the arm. However, an actuator having piston and cylinder components, sensors, a controller, a pumping system, the controller controlling the valves or switches to change the supply of fluid to the passageways of the components are not taught in Morita et al'291 or Akimoto et al. Morita et al'086 and Kajita et al are cited for the same reasons described in paragraph 7(see above). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an actuator or a cylinder apparatus as claimed in Morita et al'086 to automatically control the actuator or the cylinder apparatus in a shock-free state without requiring any position adjustment of sensors as taught by Morita et al (see column 1, lines 53-58). It would have been

Art Unit: 1734

obvious to one of ordinary skill in the art at the time the invention was made to use an actuator or a cylinder apparatus as claimed in Akimoto et al since it is a conventional actuating apparatus available in the art for moving a dispensing arm.

***Allowable Subject Matter***

10. Claims 12-13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. Claims 12-13 would be allowable because there is no teaching or suggestion in the prior art an apparatus comprising the combination of an actuator having a first component with a plurality of openings and a passageway therein connected to the plurality of openings and a second component housed within the passageway being movable between first and second positions within the passageway, the second component dividing the passageway into first and second portions and sealing the first portion from the second portion; a controller controlling the at least one valve to change the supply of fluid and first and second pumps, wherein the first pump is being connected to the first opening of the plurality of openings of the first component and the second pump being connected to the second opening of the plurality of openings of the first component.



Art Unit: 1734

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T. Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



YTT